United States Department of the Interior
BUREAU OF INDIAN AFFAIRS
PHOENIX AREA OFFICE
P.O. BOX 10
PHOENIX, ARIZONA 85001

TAKE PRIDE IN AMERICA

IN REPLY
REFER TO:

Environmental Quality Services
(602) 379-6750

DEC 14 1995

Through: Superintendent, Eastern Nevada Agency

Mr. Lindsey Manning

Chairman, Shoshone-Paiute Tribal Council

Dear Mr. Manning:

As you are aware, we are currently developing a work plan to address the ground water petroleum contamination issue in the community of Owyhee, Nevada. This work plan will generally accomplish the following:

1. Characterization of construction of three drinking water wells in the community through geophysical logging.

2. Complete removal of the Bureau of Indian Affairs (BIA) heating oil line system and assessment of subsurface for the presence of heating oil.

3. Removal of the BIA Roads Shop Facility (Facility) drain system, as feasible, and investigation of soils and ground water under the drain line including the area of its discharge for petroleum constituents and metals.

4. Removal and assessment of petroleum contaminated soils (PCS) in the area of the Facility and heating oil line, or as discovered, as feasible.

5. Assessment of three former diesel underground storage tank (UST) sites located in the area of the Facility, Jail and Power Plant.

6. Assessment of the former gasoline aboveground storage tank (AST) site located in an area northeast of the Facility.

7. Removal and assessment of a heating oil UST system identified nearby one of the heating oil line laterals.

8. Characterization of soils and ground water petroleum contamination through the conduct of the above work, and additional ground water data collection.

Work in these areas is expected to commence in 1996 as funds become available. Approval of the work plan by Tribal and Environmental Protection Agency staff will be necessary prior to the conduct of work as described in the plan.

As presented in our letter dated February 6, 1995 to you, we believe at least two leak/spill sources are responsible for contaminants identified in the ground water. We also believe, and as analytical documentation substantiates, that materials released to the ground water include oil and gasoline.

The recent installation of a water line has revealed evidence of PCS in the subsurface soils at three separate locations along the alignment of the water line. Two locations were identified in the area of the heating oil line with indications that the contaminant is heating oil or diesel fuel, while one location was identified in an area northeast of the Facility with indications that the contaminant is gasoline. These discoveries provide the following indications:

1. Site 1 (East of Highway 51, in the area of the Power Plant): Leaks and/or spills may have occurred associated with the operation of the former diesel UST at the Power Plant, the heating oil line, and/or the 16,000-gallon heating oil AST.

2. Site 2 (West of Highway 51 and south-southeast of the 10 hp pump facility): The heating oil line may have leaked in this area.

3. Site 3 (Northeast of Facility within Facility Yard): Spills and/or leaks of gasoline may have occurred at the former gasoline AST located in the northeast yard area of the Facility.

Information associated with these discoveries are being incorporated into the work plan.

In addressing the treatment or disposal of PCS removed during the project, we have determined that the costs for transportation, and treatment or disposal to be excessive as compared to onsite treatment of the PCS. We initially propose to conduct onsite treatment of diesel fuel/heating oil (oil) contaminated soils through bioremediation.

Generally speaking, planned bioremediation works as follows: Similar to humans, microorganisms require oxygen, water, and nutrients (e.g. carbon and nitrogen) to survive. Microorganisms, in processing oxygen, water, and nutrients, create carbon dioxide and water.

The treatment of the oil contaminated soils would occur as follows: First, the excavated soils would be mixed with manure or fertilizer. The mixing in of these materials provides nutrients, principally nitrogen. Carbon, as a constituent of oil, is already present. Thus, with an abundance of nutrients, the activity of microorganisms will increase. Second, the soils are spread out such that the maximum thickness is about two feet. This is to allow oxygen to access all locations within the soils. Increased oxygen leads to increased microorganism activity. Third, these soils are then moistened as necessary to insure water accesses all locations within the soils. Fourth, these soils will be periodically mixed to insure consistent treatment of all the soils. Once these nutrients (principally the carbon in the oil and the nitrogen in the manure or fertilizer) have

been consumed, the microorganisms will die.

The treatment of the gasoline contaminated soils would not require any addition of nutrients or water. When the gasoline contaminated soils are spread out to a maximum thickness of two feet, the gasoline will readily volatilize from the soils.

We initially anticipate, and plan to include provisions in our work plan/specification, the removal of approximately 2000 cubic yards of PCS from areas immediately adjacent to contaminant sources and pathways. Limitations exist regarding the removal of PCS. If widespread petroleum contamination of soils is discovered around sources or along pathways, in situ or in place treatment may be necessary.

To establish a treatment area, we will require a minimum of two acres. Although the bioremedial process is more cost effective than offsite disposal or treatment, we estimate that it may take one to two years to bioremediate the soils. In addition, we will require a backfill source.

We request from the Duck Valley Shoshone-Paiute Tribes (Tribe):

1. A determination as to whether onsite remediation as described above will be allowed on the reservation.

2. If this bioremedial alternative is allowed, a location suitable to the Tribe for the conduct of soil treatment.

3. A location to obtain backfill.

If we implement this described bioremedial approach, discussions will be necessary associated with lease and fee arrangements for using the site and treating the soils, respectively.

Responses to our request should be directed to Mr. John Krause, Phoenix Area Hazardous Waste Coordinator at (602) 379-6750. If you have any questions, please contact either Mr. Krause or Mr. Steven Tibbetts, Superintendent, Eastern Nevada Agency at (702) 738-0569.

Sincerely,

Acting Area Director

cc: Area Facilities Management
Attention: Chuck Thomas
Attention: Bhailal Patel
Area Roads
Attention: Vernon Palmer
Superintendent, Eastern Nevada Agency
Attention: Donna Bradley
Attention: Wilt Blossom
Director, Office of Trust Responsibilities
Attention: Chief, Environmental Services Staff
Director, Office of Construction Management
Attention: Kurt Gernerd
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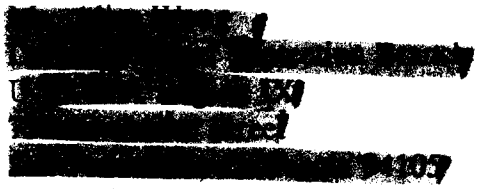

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